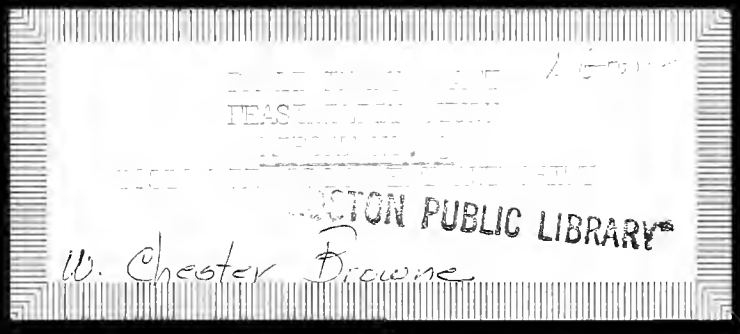

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PRELIMINARY DRAFT

FEASIBILITY STUDY

FOR

PROTOTYPE PLANS

FOR A

MULTI-STORY LIGHT MANUFACTURING PLANT

IN THE

SOUTH END URBAN RENEWAL AREA

IN THE CITY OF BOSTON

REPORT NO. 3

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Prepared for

BOSTON REDEVELOPMENT AUTHORITY

BOSTON, MASSACHUSETTS

ARCHITECTURAL, FUNCTIONAL, STRUCTURAL OBJECTIVES AND CONSIDERATIONS WITH RESPECT TO INTERNAL FLEXIBILITY AND SUITABILITY FOR A WIDE VARIETY OF TENANTS

A previous report describes the problems that must be carefully analyzed by the Designer in order to produce a multi-story prototype for industrial use with a maximum flexibility that will meet the functional requirements of a wide variety of prospective tenants.

The prototype must be of sound architectural and structural quality. In order to be economically feasible, it must be created at a cost that will permit rental of leased areas at a price which is competitive with existing available in-town properties, yet offer adequate facilities which existing properties lack.

We have previously outlined the basic physical features which will be required and which merit further examination, all calculated to produce this prototype. These features are investigated in detail in this report.

The accompanying drawings A-1, A-2 and A-3 show the floor plans of a prototype building, indicating 4 tenant spaces per floor, each tenant space approximately 6,250 square feet in area. A 4 story building will provide 16 tenant spaces; 6 stories - 24 spaces. The building is designed with uniform, square, 28' x 28' bays, 8 bays per tenant area. The 28' spacing is structurally economical, and provides the minimum number of columns in each tenant area.

The 8 bay length of the building results in maximum building length per structure without requiring an expansion joint. The depth of the building could be increased up to 6 bays, affording 4 tenant areas up to 12,500 square feet per floor. We have delineated the prototype with the 4 bay depth because we believe that tenant areas in the vicinity of 6,000 feet will more readily be leased. A single tenant may lease one or more adjacent tenant areas.

Each bank of tenant areas is equipped with a freight elevator with 10' x 10' car platform with 6,000 pounds capacity, Class C loading, and speed of 75 feet per minute.

Each building will be equipped with 2 passenger elevators, each of 2,000 pounds, 12 passenger capacity, and speed of 200 feet per minute.

Each tenant area is equipped with its own toilet facilities, separate for manufacturing and office personnel.

A circulating corridor throughout the length of the building separates the manufacturing areas from the office areas, serving as a sound lock and affording maximum quiet in the offices areas. The corridor and offices occupy one bay of the building depth. The floor slab in this bay is designed to sustain a live load of 100 pounds per square foot and a concentrated load of 2,000 pounds. The manufacturing area is designed to sustain a live load of 150 pounds per square foot.

A continuous loading platform extends the entire length of the rear of the building at the ground floor level providing maximum facility for loading and unloading trucks at each bank

of tenant areas. All freight elevators have direct access to the loading platform.

Partitions enclosing corridors, staircases, elevators, toilets and the separating partitions between tenant areas are permanent partitions of concrete block. Partitions in the office areas are movable, stock, modular, interchangeable units, installed to meet the tenants' requirements. They may be removed and re-erected at any time by building maintenance personnel to suit changing requirements. The 4'0" module is employed for office partitions and the suspended acoustical ceiling system in the offices areas. The floor covering and the ceiling will be installed prior to installation of the movable office partitions.

The lighting system used in the office area will be integrated with the ceiling suspension system. It will consist of two continuous raceways into which interchangeable fluorescent fixture units may be plugged. The fixture soffits will finish flush with the ceiling. This system will offer the utmost lighting flexibility to meet requirements of any tenant. Lighting intensity may vary from 40 to 200 foot candles in any portion of the office area. Fixtures and fill-in sections may be removed, replaced, or re-arranged at any time without re-wiring or interrupting the ceiling such as is ordinarily required for addition or removal of partitions.

The acoustical ceiling panels in the offices areas will be the removable, drop-in type, supported on a tee suspension system, allowing full access to the space above the ceiling for installation or alteration of utilities that may be required.

A similar ceiling system will be installed in the main corridor except that lighting fixtures will be the usual permanent type.

Drawings A-8 and A-9 illustrate a few of the many office arrangements obtainable, using movable partitions and the lighting system described above. Interchangeable closets and cabinets match the movable partitions.

Lighting intensity may be increased or subdued as desired by any tenant for reception, office, or display and these areas can vary in size or be changed in configuration at any time to suit any tenants' requirements.

A space is provided adjacent to the utility shaft in all tenant office areas for an air conditioning unit which may be installed at the tenants' option.

Drawing A-10 illustrates a few of the many alternate arrangements for work flow in the factory areas. The lighting system in the factory area will consist of 3 continuous raceways per bay, suspended from the structural slab which will be left exposed and painted. Interchangeable fluorescent fixture units may be plugged into these raceways, spaced as desired by the tenant to provide the lighting intensity he requires at any location and to accommodate changing lighting needs. Additional office or display may occupy a portion of the area as shown, if the tenant so desires. Partitions subdividing factory areas such as receiving, stock room, tool crib, etc., are removable, interchangeable units of wire mesh in metal channel frames, installed to meet the tenants' requirements.

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Story height for the building will be 12'0". Lighting fixture soffits will be 8'4" above the floor, allowing approximately 2'6" above the fixtures to the slab soffit above for distribution of utilities that may be required by any tenant. Each tenant area has access to a utility shaft in the factory area. The shaft will contain standard utilities such as gas, hot and cold water and drainage with valves and "T" branches so any tenant can avail himself of those he may require. Access panels will also be provided in the shaft to accommodate special utility requirements such as air exhaust or conditioning systems. Utility shafts will extend through the roof and terminate in a penthouse in which fans or other equipment may be installed.

A portion of each building will contain a basement as shown on Drawing A-1. One freight elevator will be carried down to this level. The clear height for the basement will be 10'0" except for the Boiler Room which will be 16'0". There will be a crawl space under the remainder of the building, accessible from the basement.

Drawings A-4, A-5 and A-7 illustrate architectural treatment of the exterior of the building. A simple, prefabricated, insulated panel system is employed for the office facade. The 4'0" modular width is again used and co-ordinated with the interior modular design of the office partition and ceiling system. Exterior faces of panels will be porcelain enamel, interior face galvanized steel, painted. Panel core insulation to provide a "U" factor of not more than .20. The windows will be steel, projected, stock sash with vents arranged so cleaning may be accomplished from the inside.

Windows and panels will be set in stock, prefabricated steel frames. Windows and frames will be galvanized, bonderized and field painted.

Drawing A-6 illustrates a variation of the above system, designed to provide opportunity for the erection of signs by tenants, yet preserve a dignified uniformity of architectural treatment. For this scheme, a sign outlet would be provided in the spandrels above certain windows as indicated. Removable signs to fit the spandrel would be installed and could be changed upon change of tenants.

A minimum amount of stone trim will be used on this facade. Remainder of this wall, also the rear and end walls of the building will be face brick bonded to 8" concrete block back-up, total wall thickness will be 12". Interior face of the concrete block will be exposed and painted. Windows in the rear and end walls of the building will also be stock, steel projected sash with vents arranged for window cleaning from inside the building.

Interior walls of the main entrance lobby and vestibules will have a minimum of architectural treatment such as a combination of textured and faced concrete block.